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**JOURNAL**

**April, 1992**

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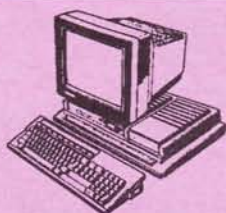
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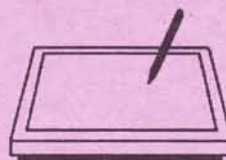
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Editor: Jim Hood  
Associate Editor: Ray Thomas

San Leandro Computer Club

P.O. Box 1506

San Leandro, CA 94577-0374

An independent, non-profit organization of Atari microcomputer users. Membership provides access to the club print and magnetic libraries, subscription to the Journal and participation in club activities. A membership application appears elsewhere in this issue.

#### Club Officers:

President	Bob Woolley	865-1672
Vice-President	Jim Hood	534-2197
Treasurer	Glenn Fowler	530-7128
Secretary	Jim Moran	865-6122

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General & ST	Keith Sammons	887-2008
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April

1991

## FEATURES

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### 8-Bit DOM

*Bob Scholar*

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## CALENDAR

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	Main Meeting 8:00 p.m. San Leandro Library	8	9	10	11
12	ST Meeting 8:00 p.m. San Leandro Library	14	ST Beginners* SIG 7:30 p.m.	16	17	18
19	20	21	22	23	Journal Deadline	25
26	27	28	29	30	31	

Call SIG Leaders to confirm meetings.



Our illustrious President, Mr. Robert Woolley, finally managed to convene a meeting on time, 8:00 PM exactly. (First time in the nine months he has been president. Probably thinks we will forget all the past goofs and vote for him again in June.) All the important Officers were also in attendance.

There was considerable discussion on the club's Moniterm monitor. The monitor is not needed by our current newsletter editor and has no other club function. As a result of the discussion a MOTION was made by Jim Hood, seconded by Jim Moran, to sell the Moniterm monitor. The motion carried. The Executive Board will work out the details.

President Woolley made a report on the efforts of a number of Atari 8 Bit owners to try and start up an 8 Bit exclusive magazine. The effort is being headed up by one of our long distant members, Jeff McWilliams. The magazine will be for the sole purpose of uniting the 8 Bit community and would cost about \$25 dollars a year. Those interested should contact Bob Woolley at 510-865-1672.

Marvin Healey, our refugee from Tracy, alerted the members to a bug in Mega Fonts for Pagestream. When selecting a font and a STYLE selection is not made the program will print garbage. This occurs even if there is only one style available.

That guy Woolley was waving an XF351 - 3 1/2" disk drive around ranting something about the 8 Bit's having everything. (Maybe we should break his bubble and tell him the ST's have had them forever.)

A question was raised as to the availability of good astronomy programs for the ST's. A couple of suggestions were made and all were asked to watch for such programs and pass the word.

340 Megabyte hard disk. The phone number is 408-745-2196. Bob has also set up a BBS at his home named Z Net Golden Gate. This is a message only board at 510-373-6792.

The TOS extension cards that allow use of the latest OS and the new 1.44 disk drives are now available for all the older ST's.

(For Your Information - The collapse of the stage during Bob's presentation was not due to an overload. After much discussion it was

decided to blame it on a rusty 2" x 12" floor joist.)

Last but not least the raffle. The first raffle for donated software from Winner's Circle and donated

Atari Explorer magazines from Atari was conducted in normal fashion and the only winners were from the "in" clique.

Perhaps it won't surprise anyone but the winner of the BIG LASER PRINTER raffle held immediately after the software raffle was one of Whatshisnames friends who attended his first meeting this month. (I guess we never will learn.) Oh well maybe next time.

Being no further business the meeting was adjourned at 10 PM.

*Jim Moran - Secretary*

## March Minutes

Jim Moran

In the absence of our designated Dirty Old Man to present the 8 Bit floppy, his totally inadequate helper did the honors. (Not too well I might add.) Despite this travesty, the disk appears to be one with a good assortment of programs.

Bob Brodie, our good friend, fellow member and the director of communications for Atari, stopped by with sample copies of the latest Atari Explorer magazine and all the latest scoop from Atari headquarters.

Bob reported that Atari has been running ads in magazines, first in music specialty ones and soon to follow ad's in desktop publishing specialty magazines.

Atari Base the Headquarter's BBS is being changed to a single line Forem program. The new setup will feature a



## RANTINGS AND RAYVINGS

# The Desirability of Upgrade

By Ray Thomas, DTP Sig Leader

I finally managed to get some answers to my questions about why Pagestream was running so slowly on my ST.

I didn't get the answers from Soft-Logik, but by asking the publisher of the Canadian produced ST/DTP magazine, Radical Type. Mike Loader, its publisher/editor, who is also the writer of Soft-Logik's manuals, gave me what I've been trying, for more than a year, to get from Soft-Logic: some kind of an answer to my questions. (Thanks, Mike.)

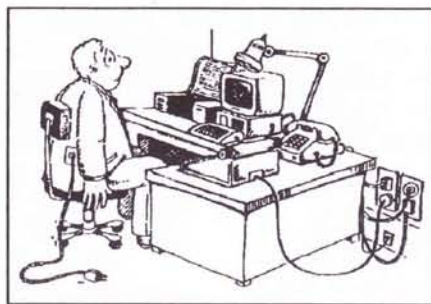
Actually, if I were more experienced in the world of software upgrades and the attendant necessity of hardware upgrades, I would have known the answers without having to ask.

### MORE MEMORY REQUIRED

What usually happens is that, whenever any software producer comes out with an upgrade, they always add more features. Now this is fine, and probably the main reason why upgrades are desirable. But in real life, these added features also require your computer to have more memory.

Back in my 520 days, that would have been a major problem, since, at the time, I was constantly having memory problems, even in using Publishing Partner. But since acquiring a Mega and subsequently upgrading it to 4 megs, those problems disappeared, even with the upgrade to Pagestream 1.8.

But "time marches on," and I now find that Pagestream 2.1 not only requires more memory in the computer, it also requires a new computer!



The "gist" of my answer from Mike Loader is that the ST is OK for "hobbyists," but for serious desktop publishing, I need at least an STe so I can operate at 16 megahertz, instead of 8.

That's reasonable. Except for the fact that, to me, this Mega ST is still "new." I haven't had it that long. And it cost me a lot of money.

And now I've got to spend another thousand dollars to get a new STe with at least 4 megs, just to be able to stay in business?

### SO MUCH FOR THE LASER PRINTER

I've been running my typesetting/publishing business "on a wing and a prayer" for three years now, waiting patiently for the time when I could afford to buy a laser printer and be able to put some of the money I've been spending for laser prints into my own pocket.

But now I've got to put that money into yet another computer, just to keep up with the requirements of the new software required to run my business.

It makes me begin to wonder if it is economically feasible to run a business that requires a computer. It's a constant fight to keep ahead of the hardware require-

ments necessary to stay out of the "hobbyist" category.

And here I thought I had the latest, "state of the art" computer! Well...I did—for about a week.

Then they came out with the STe and the TT, and I was again relegated to the "obsolete" heap.

I can understand why computer makers work so hard to improve their machines. To do so allows them to sell more of their machines.

But it would seem to me that it would be better to design them in such a manner that, instead of having to buy a complete new machine every couple of years, you could buy an inexpensive upgrade to allow your old machine, especially if it's still operating well, to operate as fast, or at least almost as fast as the new machine.

I understand that I can buy an "accelerator" to make my computer operate at 16 megahertz. But I'm hesitant to do so, because I've heard that some accelerators put sufficient strain on old components that they tend to fail, requiring the purchase of a new computer anyway, and I'm out the cost of the accelerator.

Maybe I'll just go out of the typesetting business, close down Second Income News, and concentrate strictly on writing, publishing, and selling short reports, maybe even books. I can make money doing that. I've been making money doing it for years, even before the "computer revolution."

Oh, well. Just another year in the software operation business. I'll no doubt survive. I hope.



## FROM THE ATARI WORLD

# ITEMS FROM OTHER BULLETINS

One of the nice things about doing a bulletin like this one is that the editors allow us to "lift" items from their bulletins, as they do from ours. The following items have been "sniffed out" for you from several bulletins.

### THE EXASPERATED

I noticed an article in a recent *Newsweek* about a company in the States that caters to "the exasperated." They have a shooting range where they allow you to shoot up anything you like, as long as you can get it through the door and it isn't living.

They have noticed recently, that an increasing number of computers are being dragged in for execution.

No—no Atari computers. Understand?

Anyway—some people are getting their jollies by "bumping off" their PCs with a submachine gun. Just imagine doing a "Valentine's Day massacre" on a lineup of IBMs, Macs, and Amigas.

Of course, after taking such drastic action, you might regret your anger. In anticipation, Tusk, Inc., the maker of a notebook PC (complete with keyboard and writing input tablet), advertises that its products come in "bullet-proof composite casings."

### BRODIE'S BBS

Atari's Director of Communications, Bob Brodie, has taken a major step to increase his accessibility to users. He opened his own BBS in December, operated from his home in Livermore, California.

A FoReM BBS system, it is networked throughout the world to hundreds of compatible BBSs, so that most users have a local or nearby board with direct, if not instant, access to him.

Operated with the support of



the Z\*Net Atari News Service, his board is called: "Z\*Net Golden Gate," and is FNET Node 706, open to the public 24 hours a day at 510-373-6792 (HST 14.4 US Robotics Modem).

Bob's main participation in the FNET will be via the Z\*Net Atari CrossNet Message Base, carried by 60 or more FNET boards. Other Z\*Net support BBS Systems are located in New Jersey, Florida, Colorado, New Zealand, Canada, and soon in Hawaii. (Extracted from Atari User.)

From the B. A. C. E. Line, bulletin of the Bakersfield Atari Computer Enthusiasts, in "Atari News & Rumors," by Rowland Grant.

### FIX IT WITH A CABLE

When you hook up a new printer or monitor to a computer, you may have some apprehension, but generally, it works right out of the box. It is less apparent, but when that printer or monitor works, the cable connecting it to the computer is working properly too. Or is it? Consider these two potential problems:

1. A multi-sync monitor connected to an ST through an Omniswitch: The multi-sync monitor displays great low and medium resolution color, but cannot boot in high resolution monochrome. Is the monitor incompatible? Is the Omniswitch bad? Is the cable bad?

2. A laser printer connected to an ST: The laser printer works fine with most programs, but it

prints garbage with Pagestream 2.1. Pagestream 2.1 prints fine when the ST is connected to a dot matrix printer. Assuming that what we are printing with Pagestream is good stuff like this newsletter (i.e.: not garbage): Is the printer bad? Does Pagestream have a printer driver bug? Is the cable bad?

The answer for both of the above problems required changing cables. When you have a "usually works, but sometimes it won't," it is frequently a cable that's involved. Either the signal doesn't get from point A to point B, or it can get garbled between point A and point B.

**NO SIGNAL:** An intermittent problem where a signal doesn't get from point A to point B is obviously going to happen only when a certain pin is used at certain times, and that pin is not used at other times. In the case of the ST/monitor hookup, Pin 11 of the monitor cable is used only for MONOCHROME signals. Sure enough, checking resistance along the Pin 11 lead found the cable to have an OPEN on that pin.

How do you check for that? It's really frustrating trying to hold an ohmmeter lead on a certain pin in almost any male by cable. The DIN13 connector used for the ST monitor cable is especially frustrating because its pin spacing is so small.

The solution: make a special cable that will allow an easy pin by pin hookup. Radio Shack to the rescue! The secret ingredient is a small diameter coaxial power plug.

How small? I use a 3.5mm OD by 1.3mm ID plug (Radio Shack #274-1571). this plug is small enough to fit over the pins on most every common male cable end. Radio Shack has other DC power connectors, but a plug with an OD greater than 3.5mm is too



big for most cables (so don't go cutting off the power connector from one of your 9 volt Atari 8-bit transformers unless you've checked to see if it's small enough ...chances are, IT ISN'T).

Make the cable by soldering to the center post of the coaxial plug (in fact, cut off the connector to the outside of the plug, as you want to be sure there is no connection made to the outside portion of the plug). The other end of the plug needs to match the connection for your ohmmeter.

Usually this is a "banana plug" or a "pin plug." You'll need two coaxial plugs, two ohmmeter plugs, and some flexible single conductor or double conductor wire for the cable (my cables are two 24" long, single conductor leads, but make it to suit yourself).

Once the cables are made, hook it to your ohmmeter and start checking for continuity. It's easy with this hookup.

Just for information, a multi-sync monitor for the ST must be listed as compatible for CGA through VGA. In other words, it must have a lower horizontal sync frequency of 15.7Khz and a vertical sync rate of 60hz for color video (low and medium resolution). It needs an upper horizontal sync rate of at least 35.1Khz and a vertical sync rate of 70hz for a monochrome display.

It is becoming more and more difficult to find a multi-sync (NOT A MULTI-SCAN) monitor ranging from 15.5 to 38 Khz horizontal scan rate (however, the Panasonic C1391, which was used in this case does meet that spec).

Other useable multi-sync monitors are reported to be: Acer 7 7015, AOC CM326, Mitsubishi FA3415ATK, Mitsubishi Diamond Scan 1381, NEC 3D, Princeton Ultra-14, Relisys RE-5155, Samsung CN-4551, and Sony CPD-1302.

**GARBLED SIGNAL:** Parallel printers are especially prone to problems with garbled signals. A

parallel connection sends one byte (8 bits) along 8 different paths (1 bit per path). The bits all start out from the computer at the same time. The hard part is having them all reach the printer at the same time. Long cables can cause problems, so parallel printer cables should be less than 10 feet long (6 foot is better yet).

Note: serial ports would send that same byte one bit at a time along one line to a modem or serial printer. It usually takes longer to send the first bit, then the second, etc. through the eighth bit than it does to send all 8 bits at the same time, but there is no timing problem on the other end. So longer serial cables aren't as much of a problem as are long parallel cables.

Would changing to a short printer cable have helped the laser printer make sense out of Pagestream 2.1 output? Maybe. It would be worth a try.

Printers tend to load down a computer more than most external devices. Sometimes that load is so close to being a level the computer can't deliver that it doesn't take much to upset the balance of power.

Sometimes a shorter printer cable won't make the difference. What's needed here is a cable that boosts the signal that gets to the printer. A printer buffer will do that.

A printer buffer is ordinarily used as external memory storage for the printer. The computer sends bytes faster than the printer can print them. Eventually, memory in the printer gets full, so it tells the computer to stop sending bytes until it has printed some more.

After a line or two, the printer tells the computer to send some more, but if printer memory fills up again, then transfer is stopped again. If the computer has been told to "cool it," well... that's what it does. To the extent that it doesn't do anything else while it's waiting.

You can dedicate some of the computer memory into a background print spooler, which minimizes the on/off transfer of data like a printer buffer would do. But a print spooler in computer memory does not correct any line loading problems between printer and computer. A print buffer does both.

A print buffer stores data sent by the computer until the printer says it's ready to accept it. AND since it is external to the computer, the printer load is on the buffer, not the computer.

As a result, a printer buffer usually resolves most spurious printer errors caused by line loading. In the case of the ST/ Laser Printer/Pagestream combination, a printer buffer solved the garbled printouts.

*Stolen from the "HARD-WIRE" column by George Iken in "UPDATE ATARI," the journal of the Houston Atari Computer Enthusiasts.*

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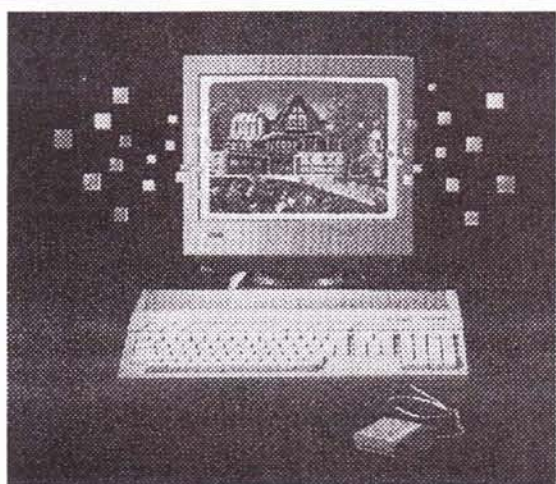
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# Pounding on the 8-Bits

*Buy your own / Share what you know / 8 bits are plenty*

April, 1992

by Bob Woolley

This month's article is written for those guys over at OL'HACKERS. Hope they like it!

How about we talk about RAM upgrades? There are quite a few of them out there to choose from - maybe this will help sort them out a little.

A RAM upgrade adds more memory to your computer.

Simple.

What isn't so simple is how you access that memory. It would be so nice if it worked like the old 800s, you add the memory and the operating system starts using it. Basic, DOS, everybody gets to use more RAM (Random Access Memory). Problem with these new upgrades (past 64K) is that the OS, ANTIC, and the 6502 CPU can't use any more than 64K at any one time. Once they count up to 65535, they must wrap back down to 0 and start over since there are only 16 address bits. Think of it as spaces in a parking lot where you can number them using only two digits - you will only get 100 numbered spaces, 0 to 99. As a consequence, memory upgrades must bank in the new memory over existing data, swapping the two data spaces with each other. What used to be your Basic program, for example, will now be disk sectors while the memory is swapped. This is called banking and is the technique used in all these hacks.

When you design such an upgrade, you must first consider where in memory and how much you will bank select for the extra memory. Banking out 256 bytes (1 page) of memory would require a lot of switching and swapping to be useful with a large data field such as the text buffer of a word processor, for example (it would be fine for a ramdisk, though - maybe some time in the future we can try that approach). Banking all 64K would crash the system since your program would also be banked out, no matter where it was in memory. The 130XE uses a 16K bank, 25% of your available memory space. Since the OS ROM sits in the last bank and the first bank has OS variables and the stack, the only choices were the second and third banks. The third bank will often have a cartridge active in it, so we really only have one choice - bank two, from \$4000 to \$7FFF.

The bank that is active is controlled by the register in

location \$D301, which is also used as a control for certain ROM, cartridge and RAM access on XL/XE machines. To use an extended bank of data, you must first be sure that no interrupt routines will be called in \$4000 thru \$7FFF. If any interrupt vectors into your banked memory, it will probably try to execute a sector of ramdisk or something equally destructive. For the most part, this is not a problem - few programs seem to use this bank in such a manner. The routines in your program that will control the bank will also have to be located outside the bank area unless you have made some special arrangements to duplicate them in the target banks. Banking is done by setting bit 4 low at address \$D301. Once bit 4 is low, any access to \$4000-\$7FFF will see RAM selected by the bank address bits, usually bits 2,3,5 and 6 at \$D301. In the case of a 130XE, setting bit 4 low actually enables the second row of RAM chips, and all banks are extended memory (using bits 2 and 3, you get 4 16K banks of extended memory). Most XL upgrades use only one set of RAM chips which results in some of the extended banks actually being the normal RAM space. For example, using bits 2,3,5 and 6 on a RAMBO upgrade will give you main RAM banks in \$4000-\$7FFF whenever you set bits 5 and 6 low (since you have 16 16K banks and only 256K of memory, all banks are selectable). What we are considering here is a very large memory space, 1 meg and larger. Our available bits in \$D301 are really only 2,3, and 6, but common practice also uses bit 5. We can also use bit 7 by using some control logic and bit 1 if we give up internal Basic. Any other bits used (0 or 4) will cause gross compatibility problems with the OS and other software. So, unless we use a separate register somewhere, we can only select 64 16K banks, four of which are going to be our main memory banks. This will still allow 960K of expanded memory - not too bad!

There are essentially two types of upgrades, ANTIC compatible and non ANTIC. Newell, 130XEs, and my own upgrades are ANTIC banking. ICD (RAMBO) and many other individuals upgrades do not bank. An ANTIC compatible upgrade makes allowance for separate access to the extra RAM between the CPU or the ANTIC screen processor. You must realize that two different subsystems in your Atari 8-bit use memory - ANTIC and the CPU. Normally, the 6502 CPU is getting instructions and data from your memory chips and executing the program that you have loaded. However, the ANTIC screen processor chip is also executing a program (called the display list) and whenever he needs data or instructions from your RAM chips, he just stops the 6502 and takes what he needs from memory. If you



are using some form of memory upgrade, the data in memory between \$4000 and \$7FFF may be banked out when ANTIC comes looking for it's data. This is going to cause quite a mess unless you design the circuitry to allow for it. The 130XE solution to this problem is to have the control register bit 4 control CPU banking and bit 5 control ANTIC banking. The down side of this method is the extra circuitry required and the loss of one of the potential bank addressing bits in \$D301, the control register. It is quite unfortunate that the most widely used memory upgrade, RAMBO, did not choose to follow the ANTIC banking and used bit 5 as a bank selection bit. As a consequence, the majority of commercial software that uses extra memory follows the RAMBO standard. Those upgrades that follow the proper use of bit 4 and 5 will therefore not work properly on commercial software. This is just added incentive to use bit 5 in any design.

One more factor - chip selection. The Atari computers use 16 pin, 64K memory chips. The 256K chips that are used to upgrade memory are also 16 pin - making it easy to go to 256K. I wish the 1 meg chips were 16 pins, then that would be a cinch also. But, they aren't. They are 18 pins devices. You can't just pop them into our old 64K locations. Some upgrades solder additional 256K chips on top of the existing ones. This is not a good idea. Each RAM chip (there are 8 memory chips) draws about 50ma. of current. Total:400ma. This is about one third of the current used by the whole computer. Adding one set of RAM chips will increase your current drain by maybe 33% - not real bad, but significant. Adding three more sets of RAM chips (to get to 1 meg) is foolish. You just have to use 1 meg chips (which only draw about 50ma. each). If you want to go to 4 meg, you must use 4 meg chips for the same reason. This means a whole new board for the RAM as well as the control circuitry. The Newell is done this way and the one I did is done this way. Newell uses chips, I used SIMMs - same difference.

One more thing - refresh. The RAM chips work like microscopic batteries, you charge them up to store a "1" and discharge them to make a "0". The fact that you have to be able to do this very quickly, makes this a very weak battery - it goes "dead" in less than a second. What is then required is to read the data in each battery and restore the cell to full charge if it is supposed to be a "1". This is called "refresh" and is performed about 60 times per second on each cell. The Atari has the circuits to do this built into the ANTIC chip, who, along with his other duties, sends out a refresh signal every so often. Biggest problem for us is that ANTIC was designed to refresh only 64K on a 1200XL and 256K on an 800XL or

130XE. He will never send refresh to the memory above 256K - making it useless. Not having much use for useless memory, I looked closely at the 1 meg chip parameters. Seems that 1 meg chips will refresh themselves if you tell them to, all 1 meg. What is needed is just an AND gate that combines the REFRESH and CAS lines of your Atari (ref. figure A). Even the old 64K ANTIC in a 1200XL will then work with 1 meg or 4 meg chips - the address counters are in the RAM chips themselves!

So, enough background, let's build an upgrade. The extended RAM is selected whenever A14 is high, A15 is low and PB4 is low on the 6520 (\$D301). The select bit enables two selector chips (74HC157s), one to bank address and the other to gate PB7 and MA7. The bank address is straightforward, portB bits are selected thru the 157 by the same clock used on the main board to multiplex the other address bits. The MA7 source is from pin 9 of the U10 when in normal mode, and from the 157 multiplexor when banking. The PB7 selector (which controls the diagnostic portion of the OS ROM) allows bank selection whenever we are banking and diagnostic selection when we are not. This works well since diagnostics are only called during bootup, when you are always in normal mode.

Construction was done on a perf board with a bunch of wires down to the main board. This is a little messy, but not too bad. Many of the SIMM lines, by the way, can be interchanged. As long as the data and addresses come out the way they go in, who cares what the chip thinks they are (by that I mean A6 can be swapped with A1 and like that. You can't swap data with address, of course). I'd much prefer a plug-in approach, but there just isn't anyplace that contains all the required lines. The locations called out are for a 1200XL. There are similar points in the 800XL which should produce identical results.

Not that much to it - four chips and a SIMM for 1 meg. Next month, we may add some more controls and do 4 meg. This will probably use a different control register and switch in four 1 meg ramdrives, since MYDOS can only access a maximum of 1 meg in it's ramdisk handler. I tried the upgrade using the Newell 1 meg MYDOS version and it seems to work OK. The machine itself has been running well (I did most of this article on it), with no strange crashes or loops. SpartaDOS cartridge does not function, I'm afraid. SpartaDOS itself only sees a 320XE, as do most commercial programs. ... I'll tell you something - loading 1 meg takes a long, long time from a disk drive. Once I get it loaded, I hate to power down. See you next month!



# 1 MEG 1200XL UPGRADE

Note: The NEWELL 1 meg MYDOS must have the selection sequence modified such that the last three bytes in the table are \$07, 05, 03, 01. I set my table to read (starting at \$BBA):

\$EF, ED, EB, E9, E7, E5, E3, E1, CF, AF, 8F, 6F, 4F, 2F, 0F, 01.

Use the 'O' command from the DUP.SYS menu and select and XE compatible, 960K ramdisk. Then alter the table at \$BBA (I used the EDASM cart). Write this new DOS to a disk. This will give you the proper 960K ramdisk.

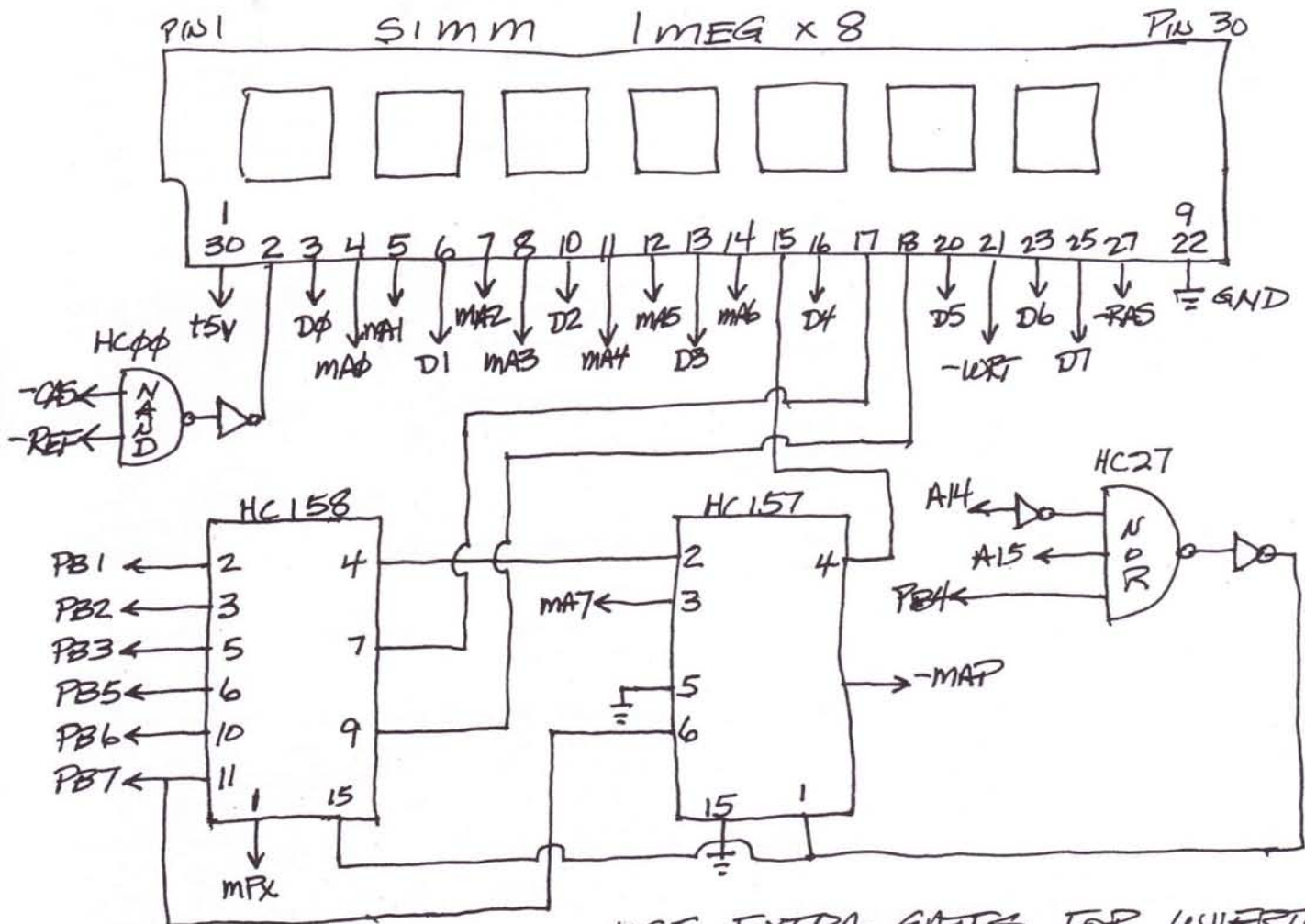
REW

Pin connections to board:

-WRT	U1	pin 3	D0	U9	pin 2
-RAS	U1	pin 4	D1	U8	pin 2
MA0	U1	pin 5	D2	U6	pin 2
MA1	U1	pin 7	D3	U5	pin 2
MA2	U1	pin 6	D4	U4	pin 2
MA3	U1	pin 12	D5	U3	pin 2
MA4	U1	pin 11	D6	U2	pin 2
MA5	U1	pin 10	D7	U1	pin 2
MA6	U1	pin 13	PB1	U23	pin 11*
MA7	U1	pin 9	PB2	U23	pin 12*
-CAS	U1	pin 15	PB3	U23	pin 13*
A14	U10	pin 11	PB4	U23	pin 14*
A15	U10	pin 10	PB5	U23	pin 15*
MPX	U10	pin 1	PB6	U23	pin 16*
-REF	U14	pin 11	PB7	U23	pin 17*
-MAP	U14	pin 6	GND	U9	pin 16
+5v	U9	pin 8			

\* denotes a pin on the IC that has been bent up out of the socket.

Solder directly to the pin.



REW 3/92

USE EXTRA GATES FOR INVERTERS  
UNUSED INPUTS TO GROUND



# OUR 8-BIT DISKS

by Bob Schlar SLCC 8-bit Software Chairman  
SLCC DISK- March 1992

->I hope everyone mailed a card to Jeff McWilliams!!

This month's feature is a Circus on a disk. Side B consists of the Pacus Circus- a set of animated cartoons generated with Movie Maker. Movie Maker was perhaps the first desktop video program - it let the user define shapes for characters, animate them, and make short subjects; which could be linked into a single theme feature like this one. When you boot side B (without BASIC), Circus will load and run automatically. Leave the drive on with the disk inside, and all eight 'films' will run in sequence. This series of (MVM) movies came from the Montreal Atari Club (MACAM). The ABACUS Club library also has three disks which are filled with other MVM programs.

The front of this disk has 3 games, 2 Utilities, 1 DEMO, 3 DOCs, and an updated SLCC FULMenu; as described below.

## CONTENTS

### Games

BULPEN.OBJ- puzzle by Rassilon.  
CMPCZ8.BIN- Crazy eights, for 1 player.  
MANSION of IZAD- Text Adventure with DOC.

### Utilities (with DOCs)

MISER.BAS- "Disk Miser" utilizes disk space  
PCPRINT.BAS- clean prints from IBM downloads

### DEMO

KALID5CP.BIN- image generator

### GRAPHICS

Pacus Circus- all of side B

## PROGRAM COMMENTS

BULPEN.OBJ by RASSILON is another 'positioning' puzzle, for one player with J/S. BULPEN.DOC was downloaded with it. It has been edited slightly.

CMPCX8.BIN by Princeton Chan is a computerized version of Crazy Eights, for one player. You play from the keyboard. Playing instructions (to discard, pick from the deck, or pass) are given as you go

along. Use BREAK and START to rerun. It has no DOC;- but it will not permit illegal moves. Rules of play are simple. (1) Discard all your cards first to win. (2) Discard by suit or face value. (3) Eights are wild- as to suit! There is a BASIC version of this game on SLCC Vol.1; #8 (10/83).

The MANSION of IZAD is a large Text Adventure with DOCUMENTATION. To start, you Run MANSION.BAS. It sets the scene, and then loads the main program- IZADV.TXT. Jon Snyder is the programmer.

KALID5CP.BIN is an image generating DEMO- also from MACAM. Try altering some of the parameters to see their effects. DOCs (including instructions for modifying parameters) are integral in the program.

MISER.BAS- (Disk Miser) by Sait Halman is from Issue #17 of ANALOG (3/84). It lets you use the unoccupied sectors on a boot disk to store additional DOS files. The DOC file (& the program) include some precautions to be followed in use. BE SURE YOU UNDERSTAND THEM BEFORE USING;- YOU COULD WRECK A VALUABLE DISK! When this was written, disks were expensive- now, you are more likely to use it to condense your disk library.

PCPRINT.BAS- by John West is from ANTIC Vol.8, #7 (for Dec. 1989/Jan. 1990). This program prints downloaded IBM format text files easily- without the extra spaces and RETURNS found in standard ASCII files. It deletes their CTRL-M + CTRL-J (CR & LF) and replaces them with the Atari EOL (155) while the file is being sent to the printer. See PCPRINT.DOC for details on usage.

As noted above, Pacus Circus is the featured item which occupies the entire back of this disk. It works on XL/XE or 400/800. No instructions are needed- just boot without BASIC. It has (hidden) DOS and AR5 files which don't show on the Directory (don't try to add files!)

This disk includes the newest update of our SLCC FULMenu program;- version No. 2.01. It is essentially the same as before, - but three sectors shorter. Next month's disk will use MYDOS and include the updated FULMenu for MYDOS. I haven't mentioned this before, but if you want to customize the heading (to print directories of your own disks, etc.) just:- (1) hit BREAK; (2) List line 40; (3) revise to suit; and (4) type RUN to go back.



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# Video Hints

*(Ed. Note: The following was submitted without attribution. We apologise to the author for not being able to give him/her proper credit.)*

*from Phoenix, the Toronto Atari Federation Newsletter, March 1992.*

Are you getting bad pictures on your video digitizer? Feel like it doesn't work? Try these tricks to help ensure good results:

1. Always use bright, even lighting on your subject when using a video camera. Television cameras need good lighting conditions to work properly. Fluorescent lights make the best light source. Their green tint is what charge coupled devices (CCD's) in cameras are most sensitive to. Self contained under-the-shelf units are both cheap and portable, most available for \$10. Surround your subject with these lights.
2. Avoid using incandescent lights as they give a red/yellow tint. You don't perceive it because your eyes are used to it. Daylight, which is blue, tends to create washed out images. Some video cameras have a setting that helps compensate for, but not eliminate, this problem. Sometimes you can use these lights for special effects. To get rich colours, try digitizing a picture taken outdoors up to 90 minutes before sunset. This time is known as the magic hour.
3. Keep the background behind the subject as simple as possible, preferably only one colour. This allows more colours in the colour palette to be available for the subject.
4. Digitized Spectrum pictures work best when the picture has less vertical structure. Should you find random horizontal streaks appearing in your Spectrum pictures, it probably means that your subject has too many different colours for Spectrum to handle. This can be resolved through a close-up or with more uniform lighting (shadows usually cause the extra detail).
5. Keep the camera in focus! This means if you are shooting art work with a macro lens, the artwork **MUST** lie flat. Bumpy surfaces or the spine of a book will cause parts to lie outside the field of focus. Uneven surfaces also cause shadows which can create stray pixels in your image.
6. If you want to digitize ST screens, pause the ST program and record it to video tape for a long time. Play the tape instead of pausing it to digitize the recorded screen. This will give you a more stable signal. If you have two ST's, you can run the composite video output of one of your ST's into your digitizer.
7. If your pictures are turning out too grainy, try increasing the scan time on your digitizer (if you can). Usually this means going to a slower scan mode. Increasing the level of your lighting should also help. Some cameras have an auto iris that will close up more if you increase the light level. If your camera has a backlighting setting, use it to override the iris.
8. If you find interference patterns show up in your digitizations, try de-focusing the camera slightly. This can sometimes be caused by trying to digitize photographs that are made out of many dots. De-focusing the camera blends the dots together.
9. Keep the camera still. Movement, no matter how small, commonly causes a great loss of resolution in a digitized picture. Use a tripod to keep the camera steady.
10. Pick subjects that are made out of many shades of the same colour. Subjects that have wide expanses of few colours are good too. Line art makes a good subject as well.





# Microworld

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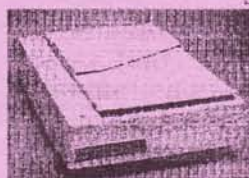
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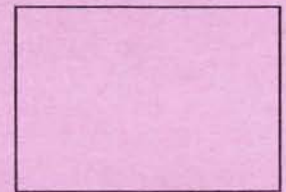
## Who was that Masked Man?

We had a visitor from Lone Wolf Software at our last meeting. His name is David Tracy and he has been making little goodies up in Oregon for the 8-bits for a number of years now. He didn't quite make it in time to demo his 256K 800XL (he did manage to win the laser printer!), but he did donate one to the Club as a raffle prize. Come see it in action along with a 1 meg 1200XL and 320x200x4 8-bit graphics. Who knows? You may take it home with you!

For you ST types out there, rumor has it that a hand scanner will be up for grabs, so bring big bucks.

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